

Application No. 10/728,210  
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Docket No. CL-2248 US NA  
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### Appendix A

(i) Amendments in marked-up form to  
Claims 68~71, 74~77 and 79~80;

(ii) New Claims 110~123; and

(iii) Status of all pending claims  
(68~71, 74~77, 79~80 and 110~123).

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1 ~ 67. (cancelled).

68. (currently amended) ~~The device of A triode according to Claim 67~~110 wherein the particulates are selected from the group consisting of glass, oxides, carbides, nitrides, metals, ~~metal-alloys~~, metalloids, ~~metalloid-alloys~~, alloys of metals and metalloids, carbon and mixtures thereof.

69. (currently amended) ~~The device of A triode according to Claim 68~~ wherein the oxides are selected from the group consisting of aluminum oxides, silicon oxides, tin oxides and mixtures thereof.

70. (currently amended) ~~The device of A triode according to Claim 67~~110 wherein the particulates are selected from the group consisting of transition metals and their alloys.

71. (currently amended) ~~The device of A triode according to Claim 70~~ wherein the transition metals are selected from the group consisting of Al, Cu, Ag, Au, Pt, and Pd.

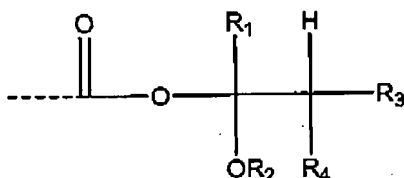
72 ~ 73. (cancelled).

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74. (currently amended) ~~The device of A triode according to Claim 73110 wherein the carbon is in the form of particulates comprise carbon nanotubes.~~

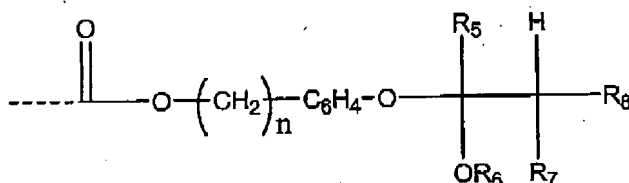
75. (currently amended) ~~The device of A triode according to Claim 67110 wherein the photopolymer system is selected from the group consisting of novolac-diazonaphthoquinone resins.~~

76. (currently amended) ~~The device of A triode according to Claim 67110 wherein the photopolymer system comprises a (meth)acrylate polymer or copolymer that comprises one or more of the pendant groups as described by Formulae I, II and III, to-wit:~~



Formula I

wherein R<sub>1</sub> is hydrogen or C<sub>1</sub>-C<sub>6</sub> alkyl; R<sub>2</sub> is C<sub>1</sub>-C<sub>6</sub> alkyl; and R<sub>3</sub> and R<sub>4</sub> independently are hydrogen or C<sub>1</sub>-C<sub>6</sub> alkyl; and wherein R<sub>1</sub> and R<sub>2</sub>, or R<sub>1</sub> and R<sub>3</sub>, or R<sub>2</sub> and R<sub>3</sub> may be joined to form a 5-, 6-, or 7-membered ring.

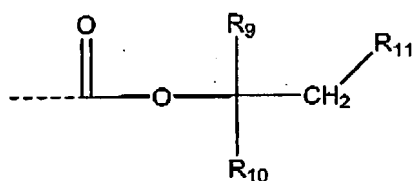


Formula II

wherein n is 0-4; R<sub>5</sub> is hydrogen or C<sub>1</sub>-C<sub>6</sub> alkyl; R<sub>6</sub> is C<sub>1</sub>-C<sub>6</sub> alkyl; and R<sub>7</sub> and R<sub>8</sub> independently are hydrogen or C<sub>1</sub>-C<sub>6</sub> alkyl; and wherein R<sub>5</sub> and R<sub>6</sub>,

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or R<sub>5</sub> and R<sub>7</sub>, or R<sub>6</sub> and R<sub>7</sub> may be joined to form a 5-, 6-, or 7-membered ring.



### Formula III

wherein R<sub>9</sub> is hydrogen or lower alkyl; R<sub>10</sub> is lower alkyl; and R<sub>11</sub> is hydrogen or lower alkyl; and wherein a lower alkyl group includes alkyl groups having 1 to 6 linear or 3 to 6 cyclic carbon atoms.

77. (currently amended) ~~The device of A triode according to Claim 67~~110 wherein the photopolymer system comprises one or more acid labile monomeric components selected from:

- tetrahydropyranyl methacrylate (or acrylate);
- tetrahydropyranyl p-vinylbenzoate;
- 1-ethoxy-1-propyl p-vinylbenzoate;
- 4-(2-tetrahydropyranyloxy)benzyl methacrylate (or acrylate);
- 4-(1-butoxyethoxy)benzyl methacrylate (or acrylate);
- t-butyl methacrylate (or acrylate);
- neopentyl methacrylate (or acrylate);
- 1-bicyclo{2,2,2}octyl methacrylate (or acrylate) and their derivatives;
- 1-bicyclo{2,2,1}heptyl methacrylate (or acrylate) and their derivatives;
- 1-bicyclo{2,1,1}hexyl methacrylate (or acrylate) and their derivatives;
- 1-bicyclo{1,1,1}pentyl methacrylate (or acrylate) and their derivatives;

and

- 1-adamantyl methacrylate (or acrylate) and their derivatives.

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78. (cancelled).

79. (currently amended) ~~The device of A triode according to Claim 67110~~ wherein the particulates comprise about 20 to about 70 vol% of the composition.

80. (currently amended) ~~The device of A triode according to Claim 67110~~ wherein the particulates are less than 100 microns in their longest dimension.

81 ~ 109. (cancelled).

110. (new) A normal gate triode that comprises a gate layer and a dielectric layer, wherein (a) each layer comprises a composition that comprises (i) at least one positive imageable photopolymer system, and (ii) about 1 to about 70 vol% particulates, and (b) each layer has the same size.

111. (new) A triode according to Claim 110 wherein each layer has the same shape.

112. (new) An inverted gate triode that comprises an emitter layer, a cathode layer and a dielectric layer, wherein (a) each layer comprises a composition that comprises (i) at least one positive imageable photopolymer system, and (ii) about 1 to about 70 vol% particulates, and (b) each layer has the same size.

113. (new) A triode according to Claim 112 wherein the particulates are selected from the group consisting of glass, oxides, carbides, nitrides, metals, metalloids, alloys of metals and metalloids, carbon and mixtures thereof.

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114. (new) A triode according to Claim 113 wherein the oxides are selected from the group consisting of aluminum oxides, silicon oxides, tin oxides and mixtures thereof.

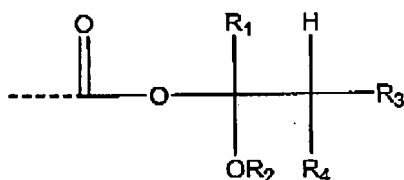
115. (new) A triode according to Claim 112 wherein the particulates are selected from the group consisting of transition metals and their alloys.

116. (new) A triode according to Claim 115 wherein the transition metals are selected from the group consisting of Al, Cu, Ag, Au, Pt, and Pd.

117. (new) A triode according to Claim 112 wherein the particulates comprise carbon nanotubes.

118. (new) A triode according to Claim 112 wherein the photopolymer system is selected from the group consisting of novolac-diazonaphthoquinone resins.

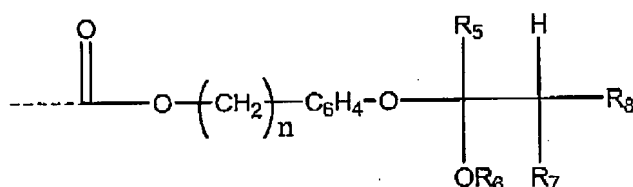
119. (new) A triode according to Claim 112 wherein the photopolymer system comprises a (meth)acrylate polymer or copolymer that comprises one or more of the pendant groups as described by Formulae I, II and III, to-wit:



Formula I

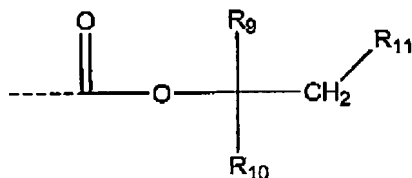
wherein R<sub>1</sub> is hydrogen or C<sub>1</sub>-C<sub>6</sub> alkyl; R<sub>2</sub> is C<sub>1</sub>-C<sub>6</sub> alkyl; and R<sub>3</sub> and R<sub>4</sub> independently are hydrogen or C<sub>1</sub>-C<sub>6</sub> alkyl; and wherein R<sub>1</sub> and R<sub>2</sub>, or R<sub>1</sub> and R<sub>3</sub>, or R<sub>2</sub> and R<sub>3</sub> may be joined to form a 5-, 6-, or 7-membered ring.

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Formula II

wherein  $n$  is 0-4;  $R_5$  is hydrogen or  $C_1$ - $C_6$  alkyl;  $R_6$  is  $C_1$ - $C_6$  alkyl; and  $R_7$  and  $R_8$  independently are hydrogen or  $C_1$ - $C_6$  alkyl; and wherein  $R_5$  and  $R_6$ , or  $R_5$  and  $R_7$ , or  $R_6$  and  $R_7$  may be joined to form a 5-, 6-, or 7-membered ring.



Formula III

wherein  $R_9$  is hydrogen or lower alkyl;  $R_{10}$  is lower alkyl; and  $R_{11}$  is hydrogen or lower alkyl; and wherein a lower alkyl group includes alkyl groups having 1 to 6 linear or 3 to 6 cyclic carbon atoms.

120. (new) A triode according to Claim 112 wherein the photopolymer system comprises one or more acid labile monomeric components selected from:

- tetrahydropyranyl methacrylate (or acrylate);
- tetrahydropyranyl p-vinylbenzoate;
- 1-ethoxy-1-propyl p-vinylbenzoate;
- 4-(2-tetrahydropyranyloxy)benzyl methacrylate (or acrylate);

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4-(1-butoxyethoxy)benzyl methacrylate (or acrylate);  
t-butyl methacrylate (or acrylate);  
neopentyl methacrylate (or acrylate);  
1-bicyclo{2,2,2}octyl methacrylate (or acrylate) and their derivatives;  
1-bicyclo{2,2,1}heptyl methacrylate (or acrylate) and their derivatives;  
1-bicyclo{2,1,1}hexyl methacrylate (or acrylate) and their derivatives;  
1-bicyclo{1,1,1}pentyl methacrylate (or acrylate) and their derivatives;

and

1-adamantyl methacrylate (or acrylate) and their derivatives.

121. (new) A triode according to Claim 112 wherein the particulates comprise about 20 to about 70 vol% of the composition.

122. (new) A triode according to Claim 112 wherein the particulates are less than 100 microns in their longest dimension.

123. (new) A triode according to Claim 112 wherein each layer has the same shape.